

**APPLICATION**

**OF**

**KAREN GOTTLIEB-MYERS**

**AND**

**DALE MICHAEL FETTERLEIGH**

**FOR**

**UNITED STATES LETTERS PATENT**

**ON**

**IMPROVEMENTS IN POGO STICKS**

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**Attorneys**  
**FULWIDER PATTON LEE & UTECHT, LLP**  
**Howard Hughes Center**  
**6060 Center Drive, Tenth Floor**  
**Los Angeles, California 90045**

**EXPRESS MAIL NO: EL 691921100US**

**ABSTRACT**

A pogo stick includes (a) a handle, (b) a bellows extending from the handle, (c) a helical spring disposed within, and coupled to, the bellows to become constrained when the bellows is constrained, (d) an actuator disposed within the helical turns of the spring, (e) a platform disposed on the actuator for supporting a user standing on the platform and (f) a at the bottom of the actuator. When the bellows and the spring are constrained, the release of the constraint causes the pogo stick to hop on a support surface. Training members made from a resilient material and disposed at opposite ends of the platform are coupled to the platform at intermediate positions along their length. The training members are disposed in the direction that the user is facing when he stands on the platform. The training members extend outwardly and downwardly from the platform to a support surface to provide a support on the support surface at four (4) spaced positions. The outward direction of the training members at their opposite ends is enhanced by a flattening of the training members when the pogo stick is actuated to provide a hopping movement of the pogo stick. The training members provide a balance to the pogo stick in the manner of trainer wheels on a bicycle. In this way, a young child can learn to operate a pogo stick properly and safely. The training members can then be removed from the pogo stick.

This invention relates to pogo sticks and, more particularly, to pogo sticks for young children. Even more particularly, the invention relates to pogo sticks with training members which are applied to the pogo sticks when young children are learning how to operate the pogo sticks and which are removed from the pogo sticks after the young children have learned how to operate the pogo sticks.

### **BACKGROUND OF THE INVENTION**

Pogo sticks have been in existence for decades and provide a distinct pleasure to children, particularly to children of advanced age, when operated properly. To operate a pogo stick, a child steps on a foot rest on a housing on the pogo stick, grasps a handle on the housing and hops through successive iterations until the child loses his or her balance or has reached a particular count of hops. It is a challenge, and provides a series of challenges, to a child to be able to hop on the pogo stick through a number of successive iterations without having to jump from the pogo stick because of a loss of balance.

Pogo sticks are generally used by children in the age group of approximately seven (7) to twelve (12) years. It would be desirable to provide pogo sticks for children

in the age group younger than seven (7) years. However, these children are not able to provide the balance that older children can provide.

### **BRIEF DESCRIPTION OF A PREFERRED EMBODIMENT OF THE INVENTION**

A pogo stick includes (a) a handle, (b) a bellows extending from the handle, (c) a helical spring disposed within, and coupled to, the bellows to become constrained when the bellows is constrained, (d) an actuator disposed within the helical turns of the spring, (e) a platform disposed on the actuator for supporting a user standing on the platform and (f) a cap at the bottom of the actuator. When the bellows and the spring are constrained, the release of the constraint causes the pogo stick to hop on a support surface. Training members made from a resilient material and disposed at opposite ends of the platform are coupled to the platform at intermediate positions along their length. The training members are disposed in the direction that the user is facing when he stands on the platform. The training members extend outwardly and downwardly from the platform to a support surface to provide a support on the support surface at four (4) spaced positions. The outward direction of the training members at their opposite ends is enhanced by a flattening of the training members when the pogo stick is actuated to provide a hopping movement of the pogo stick. The training members provide a balance to the pogo stick

in the manner of trainer wheels on a bicycle. In this way, a young child can learn to operate a pogo stick properly and safely. The training members can then be removed from the pogo stick.

### **BRIEF DESCRIPTION OF THE DRAWINGS**

In the drawings:

Figure 1 is a perspective view of a pogo stick, as seen from a position in front of the pogo stick, including a bellows, a spring and removable training members for teaching young children how to maintain their balance when learning how to operate the pogo stick, the pogo stick being shown in an unconstrained relationship;

Figure 2 is a side elevational view of the pogo stick in the unconstrained relationship of the pogo member;

Figure 3 is a front elevational view, partially in section, showing the internal construction of the pogo stick when the pogo stick is in an unconstrained relationship;

Figure 4a is a fragmentary front elevational view of the pogo stick with the bellows, the spring and the training members in an unconstrained relationship on a support surface; and

Figure 4b is a fragmentary front elevational view similar to that shown in Figure 4a and shows the pogo stick in a constrained relationship with the bellows, the spring and the training members on the support surface, a portion of the pogo stick being broken away to show other elements in additional detail.

### **DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT**

Figures 1-4 show a pogo stick, generally indicated at 10, constituting a preferred embodiment of the invention. The pogo stick 10 includes a bellows 12 defined by a series of scalloped portions 14. The bellows 12 is constrainable upon the exertion of a force in the vertical direction on the bellows. A handle generally indicated at 16 and having a pair of oppositely extending handle bars 18 is disposed at the upper end of the bellows 12. An ornamental area 19 may be provided between the handle 16 and the bellows 12 to receiver decoration for enhancing the aesthetic effect of the pogo stick 10 to a child. A pedestal or foot rest 20 is disposed at the lower end of the bellows 12.

A scaffold 22 is disposed within the bellows. The scaffold 22 is coupled to the bellows 12 by rigidifiers 24 at alternate ones of the scallops 14. The scaffold 22 extends to the lower surface of the platform 20 as indicated at 26. A spring 28, preferably

helical, is confined between sleeves 30 and 32 which are disposed respectively at the upper and lower ends of the scaffold. An actuator 34 extends through the helical turns of the spring 28 to a position below the platform 20. A cap 36 preferably made from a suitable material such as rubber is disposed on the actuator 34 at the bottom of the actuator.

Training members generally indicated at 38 and made from a resilient material such as steel are suitably attached to the bottom of the platform 20. The training members 38 may be in the form of resilient rods. The attachment of the training members 38 to the platform is provided 40 by flanges in Figure 3, and by screws 41 in Figure 4b, at an intermediate position along the length of the training members. The attachment is such as to provide for the removal of the training members 38 from the platform when the child using the pogo stick has learned how to operate the pogo stick 10 properly.

The training members 38 are disposed to extend in the same direction as the direction in which the child is facing when the child is standing on the platform 20. The training members 38 are provided with a roll-up configuration 42 at their opposite ends so that the child cannot be injured by sharp projections on the training members and so

that the disposition of the training members 42 on a support surface 44 is stabilized. The roll-up configurations 42 also prevent the training members 38 from scratching the support surface 44.

When a child desires to operate the pogo stick 10, the child disposes the child's feet on the platform 20 and manually grasps the handle bars 18 at the opposite ends of the handles 16. The child then operates the pogo stick 10 to provide progressive hops along the support surface 44. Every time that the actuator 34 impinges on the support surface 44, the spring 28 becomes constrained to provide energy for the next hop on the ground. The constraint of the spring 28 becomes relieved when the actuator 34 leaves the support surface 44 in the next hop.

The training members 38 constitute rods made from a resilient material. The training members 38 normally have a disposition on the support surface 44 as shown in figure 4a. When the training members 38 impinge on the support surface 44 at the end of a hop as shown in Figure 4b, the opposite ends of each training member 38 become further separated from each other as shown in Figure 4b. This enhances the stability of the pogo stick 10 on the support surface 44 and facilitates the training of the child to operate the pogo stick properly. When the child has learned how to operate the pogo



stick 10 properly, the training members 38 can be easily removed from the platform by removing the screws 42 in Figure 4b.

Although this invention has been disclosed and illustrated with reference to particular embodiments, the principles involved are susceptible for use in numerous other embodiments which will be apparent to persons of ordinary skill in the art. The invention is, therefore, to be limited only as indicated by the scope of the appended claims.